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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,533	10/23/2003	Fabio Longoni	60279.00062	6372

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SQUIRE, SANDERS & DEMPSEY L.L.P.
8000 TOWERS CRESCENT DRIVE
14TH FLOOR
VIENNA, VA 22182-6212

EXAMINER	
MAIS, MARK A	

ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/690,533	LONGONI ET AL.	
	Examiner	Art Unit	
	MARK A. MAIS	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,8-11 and 14-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,8-11 and 14-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 7, 2008 has been entered.

Priority

2. Acknowledgment is made of Applicants' claim for foreign priority under 35 U.S.C. 119(a)-(d). It is noted, however, that the Applicants have not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-26 are rejected under 35 U.S.C. 102(e) as being unpatentable over Lucidarme et al. (USP 7,123,910).

5. With regard to claim 1, Lucidarme et al. discloses a method comprising:

creating a first interface instance **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]** between an interworking unit **[Figs. 5-8, e.g., any one of IWUs 32, 42, or 46]** and at least one of the networks selected from a group of networks comprising a core network **[Figs. 5-8, Core Network 70]** and a neighboring radio access network *wherein the method implements a signaling bearer connection in a distributed radio access network, the method* **[Figs. 5-8; networks 30, 40, 50, and 60]**,

creating a second interface instance between said interworking unit and a set of *internet protocol* base stations **[just as an interface is created for connections away from the radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations) such as between the RNC and the IWU, col. 10, lines 24-39; thus, the reverse is also true—between the IWU and the RNC, col. 13, lines 4-14]**,

assigning temporary identifier information to user equipment that has a connection to *an internet protocol* base station *of said set of internet protocol base stations* **[temporary identifiers are initially required to identify the mobile terminal, col. 12, line 61 to col. 13, line 3]**, and

mapping of the signaling traffic between said first and said second interface instances in said interworking unit, said mapping assigning signaling traffic from said first interface instance to said second interface instance based on said temporary identifier information **[at handoff, paging messages are tunneled to the IWU; then the IWU generates the required signaling on the local network, col. 10, lines 61-65; thus, the reverse is also true—between the IWU and the SGSN (and then to the RNC), col. 13, lines 4-14; temporary identifiers are initially required to identify the mobile terminal, col. 12, line 61 to col. 13, line 3]**.

Lucidarme et al. does not specifically disclose that the base stations are internet protocol base stations. However, Lucidarme et al. does disclose the use of UMTA and GPRS architectures **[col. 1, lines 40-50]**. Such third generation networks use packet-switching to route packets to and from base stations. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used internet protocol base stations because such base stations are used in UMTS and GPRS packet-switching architectures.

6. With regard to claim 2, Lucidarme et al. discloses creating a signaling bearer connection for a user equipment through said first and second instances **[Figs. 6 and 8, RAB assignment request (Fig. 6) and RAB assignment (Fig. 8); the reverse direction is also true, col. 13, lines 4-14]**.

7. With regard to claim 3, Lucidarme et al. discloses translating a transport address from

the form used in said first interface instance to the form used in said second interface instance **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

8. With regard to claim 4, Lucidarme et al. discloses translating a transport address from the form used in said second interface instance to the form used in said first interface instance **[a tunnel is formed from the SGSN to the IWU, col. 10, lines 44-47; the reverse is also true—from the IWU, to the SGSN, and then the RNC, col. 13, lines 4-14]**.

9. With regard to claim 5, Lucidarme et al. discloses translating a signaling protocol of said first interface instance to a signaling protocol of said second interface instance **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

10. With regard to claim 6, Lucidarme et al. discloses translating a signaling protocol of said second interface instance to a signaling protocol of said first interface instance **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

11. With regard to claim 7, Lucidarme et al. discloses transmitting said signaling traffic transparently through said interworking unit between said first and second instances **[IWUs provides transparency by being network elements in each of their respective networks and translating traffic from the common SGSN, col. 7, lines 40-60; especially if the SGSN is connected directly to the IWUs, col. 7, lines 62-64]**.

12. With regard to claim 8, Lucidarme et al. discloses composing said identifier information in a three-part form wherein the first part identifies said interworking unit, the second part identifies said *internet protocol* base station and the third part identifies said user equipment **[for a handover request from a specific RNC (thus, with the base station address), the SGSN transmits the handover request to the mobile terminal (mobile address is necessary for handover) by sending it to the IWU in the proper network (known IWU address), col. 10, lines 24-39; the reverse direction is also true, col. 13, lines 4-14]**.

13. With regard to claim 9, Lucidarme et al. discloses assigning a unique address to said interworking unit, and addressing said set of *internet protocol* base stations, which has been connected to said interworking unit with said unique address **[for a handover request from a specific RNC (thus, with the base station address), the SGSN transmits the handover request to the mobile terminal (mobile identifier is necessary for handover) by sending it to the IWU in the proper network (known**

IWU address), col. 10, lines 24-39; the reverse direction is also true, col. 13, lines 4-14].

14. With regard to claim 10, Lucidarme et al. discloses controlling user plane traffic by said interworking unit **[the IWU controls the traffic from the mobile and even acts as a gateway for the user traffic, col. 7, lines 40-58]**.

15. With regard to claim 11, Lucidarme et al. discloses a system comprising

a set of *internet protocol* base stations **[Figs. 5-8, radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations)]**, and

at least one of a core network **[Figs. 5-8, Core Network 70]**, and a neighboring radio access network **[Figs. 5-8; networks 30, 40, 50, and 60]**, and

an interworking unit **[Figs. 5-8, e.g., any one of IWUs 32, 42, or 46]** for *configured to connect* said core network to said set of *internet protocol* base stations and to at least one of said networks **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]**, said interworking unit comprising:

a first interface instance between said interworking unit and at least one of said networks **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]**,

a second interface instance between said interworking unit *and said* set of *internet protocol* base stations (IP BTS) **[just as an interface is created for connections away from the radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations) such as between the RNC and the IWU, col. 10, lines 24-39; thus, the reverse is also true—between the IWU and the RNC, col. 13, lines 4-14]**, and

a *mapper configured to map* the signaling traffic between said first and said second interface instances, said *mapper* assigning signaling traffic from said first interface instance to said second interface instance **[at handoff, paging messages are tunneled to the IWU; then the IWU generates the required signaling on the local network, col. 10, lines 61-65; thus, the reverse is also true—between the IWU and the SGSN (and then to the RNC), col. 13, lines 4-14]** based on temporary identifier information associated with a user equipment **[temporary identifiers are initially required to identify the mobile terminal, col. 12, line 61 to col. 13, line 3]**.

Lucidarme et al. does not specifically disclose that the base stations are internet protocol base stations. However, Lucidarme et al. does disclose the use of UMTA and GPRS architectures **[col. 1, lines 40-50]**. Such third generation networks use packet-switching to route packets to and from base stations. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used internet protocol base stations because such base stations are used in UMTS and GPRS packet-switching architectures.

16. With regard to claim 12, Lucidarme et al. discloses that said interworking unit is implemented in a radio access network server **[Figs. 5-8, e.g., interpreted as the combination of Bluetooth/BLUEPAC 40 and IWU 42]**.

17. With regard to claim 13, Lucidarme et al. discloses that radio access network server **[Figs. 5-8, e.g., interpreted as the combination of Bluetooth/BLUEPAC 40 and IWU 42]** controls the functions of radio access network gateway and circuit switched gateway **[determines whether to go to SGSN (packet-switched)—thus it must also necessarily determine if it must go to an MSC (circuit-switched), col. 7, lines 40-60]**.

18. With regard to claim 14, Lucidarme et al. discloses that said interworking unit is connected to *said* set of *internet protocol* base stations, and that said set of *internet protocol* base stations is addressed as one logical interworking unit **[for a handover request from a specific RNC (thus, with the base station address), the SGSN transmits the handover request to the mobile terminal (mobile identifier is necessary for handover) by sending it to the IWU in the proper network (known IWU address), col. 10, lines 24-39; the reverse direction is also true, col. 13, lines 4-14; thus, it terminates at one network address (IWU address) before appropriate translation to the mobile terminals]**.

19. With regard to claim 15, Lucidarme et al. discloses that said interworking unit is assigned a unique network address for addressing said set of base stations and that the signaling connection is terminated in said interworking unit **[for a handover request**

from a specific RNC (thus, with the base station address), the SGSN transmits the handover request to the mobile terminal (mobile identifier is necessary for handover) by sending it to the IWU in the proper network (known IWU address), col. 10, lines 24-39; the reverse direction is also true, col. 13, lines 4-14; thus, it terminates at one network address (IWU address) before appropriate translation to the mobile terminals].

20. With regard to claim 16, Lucidarme et al. discloses a transport address entity for *configured to translate* the transport addresses from the form used in said first interface instance to the form used in said second interface instance, and vice versa **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

21. With regard to claim 17, Lucidarme et al. discloses protocol entity for *configured to translate* the protocols of said first interface instance to the protocols of said second interface instance, and vice versa **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

22. With regard to claim 18, Lucidarme et al. discloses that said *internet protocol* base station is equipped with radio access control equipment **[Figs. 5-8, radio network access**

controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations)].

23. With regard to claim 19, Lucidarme et al. discloses an *apparatus* **[Figs. 5-8, e.g., any one of IWUs 32, 42, or 46]** *comprising:*

a first interface instance **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]** *wherein the apparatus is connected to at least one of a core network* **[Figs. 5-8, Core Network 70]** *and a neighboring radio access network* **[Figs. 5-8; networks 30, 40, 50, and 60]** *and to a set of internet protocol base stations* **[Figs. 5-8, radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations)]** *in a distributed radio access network*

a second interface instance between said *apparatus* **[Figs. 5-8, e.g., any one of IWUs 32, 42, or 46]** and a set of *internet protocol* base stations **[Figs. 5-8, radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations)]** which has been equipped with radio access control equipment **[just as an interface is created for connections away from the radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations) such as between the RNC and the IWU, col. 10, lines 24-39; thus, the reverse is also true—between the IWU and the RNC, col. 13, lines 4-14]**, and

a *mapper configured to map* the signaling traffic between said first and said second interface instances, said mapping assigning signaling traffic from said first interface instance to said second interface instance based on temporary identifier information associated with a user equipment, *wherein* said *apparatus is configured to function* as a logical radio network controller **[at handoff, paging messages are tunneled to the IWU; then the IWU generates the required signaling on the local network, col. 10, lines 61-65; thus, the reverse is also true—between the IWU and the SGSN (and then to the RNC), col. 13, lines 4-14; temporary identifiers are initially required to identify the mobile terminal, col. 12, line 61 to col. 13, line 3]**.

Lucidarme et al. does not specifically disclose that the base stations are internet protocol base stations. However, Lucidarme et al. does disclose the use of UMTA and GPRS architectures **[col. 1, lines 40-50]**. Such third generation networks use packet-switching to route packets to and from base stations. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used internet protocol base stations because such base stations are used in UMTS and GPRS packet-switching architectures.

24. With regard to claim 20, Lucidarme et al. discloses that a first interface instance is created between said interworking unit and said core network **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]**.

25. With regard to claim 21, Lucidarme et al. discloses that a first interface instance is created between said *apparatus* and a neighboring radio network controller **[Figs. 5-8, e.g., between Bluetooth 40 and IWU 42]**.

26. With regard to claim 22, Lucidarme et al. discloses that a first interface instance is created between said *apparatus* and a neighboring base station controller **[Figs. 5-8, e.g., between BLUEPAC 40 and IWU 42]**.

27. With regard to claim 23, Lucidarme et al. discloses that a second interface instance is created between said *apparatus* and a set *internet protocol* base stations **[Figs. 5-8, e.g., between multiple HIPERLANs 30]**.

28. With regard to claim 24, Lucidarme et al. discloses that said first and second interface instances are terminated in said *apparatus* **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44; Figs. 5-8, e.g., between BLUEPAC 40 and IWU 42]**.

29. With regard to claim 25, Lucidarme et al. discloses a transport address *translator configured to translate* the transport addresses from the form used in said first interface instance to the form used in said second interface instance, and vice versa **[translating transport address from the Home Location Register (HLR) to the IWU (and**

appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14].

30. With regard to claim 26, Lucidarme et al. discloses a protocol entity *configured to translate* the protocols of said first interface instance to the protocols of said second interface instance, and vice versa **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

Response to Arguments

31. Applicant's arguments with respect to claims 1-26 have been considered but they are not persuasive. Applicants state that the mapping between interface instances is not based on the temporary identifier information **[See Applicants' Amendment dated April 9, 2008, page 13, paragraph 1]**. Specifically, Applicants state that the second interface instance is towards internet protocol base stations; that the temporary identifier information identifies internet protocol base stations; and that Lucidarme et al. fails to disclose this limitation **[See Applicants' Amendment dated April 9, 2008, page 13, paragraph 3]**. The examiner respectfully agrees. However, the examiner respectfully disagrees with the argument that such a limitation would not have been obvious to one of ordinary skill in the art. As noted in the rejection of claims 1 above, Lucidarme et al. does not specifically disclose that the base stations are internet protocol base stations. However, Lucidarme et al. does disclose the use of UMTA and GPRS architectures **[col.**

1, lines 40-50]. Such third generation networks use packet-switching to route packets to and from base stations. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used internet protocol base stations because such base stations are used in UMTS and GPRS packet-switching architectures.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Rhee et al. (USP 7,286,831), Method of balancing load and method of setting up call using the same General Packet Radio Service Network.

(b) Matusz (USP 7,197,311), Data routing in a universal mobile telecommunications system.

(c) Wu (USP 7,382,750), Inter-RAT handover to UTRAN with simultaneous PS and CS domain services.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK A. MAIS whose telephone number is (571)272-3138. The examiner can normally be reached on M-Th 5am-4pm.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

May 20, 2008

/Mark A. Mais/

Examiner, Group Art Unit 2619

/Wing F. Chan/

Supervisory Patent Examiner, Art Unit 2619

6/9/08